

# Virginia Commission on Energy and Environment

## Renewable Energy Subcommittee

October 22, 2009, 10:00 am  
Pittsylvania County Public Library—Gretna Branch  
Gretna, Virginia

### Summary

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Delegate Charles D. Poindexter opened the meeting with a welcome to the audience and introduced the members.

**Green Jobs: Today and Tomorrow.** Brett Vassey of the Virginia Manufacturer's Association led the discussion of "Green Jobs." He began by pointing the members toward a white paper developed by the National Association of State Directors of Career Technical Education Consortium—Green Jobs and CTE. The paper notes that there is no universal definition of a green job, but that such jobs typically (i) provide products and services that promote renewable energy resources, reduce pollution, and conserve energy and natural resources, and (ii) exist in both skilled trades and professional occupations. Mr. Vassey stressed that green jobs are not a unique or novel set of jobs, but rather a classification of traditional occupations as applied in a new industry or in traditional industries that produce or promote renewable energy and resource conservation. Mr. Vassey stated that assistance and worker development should be directed at the workforce as a whole, with application and benefits to the "green" sector occurring incidentally.

John Petchul with Greif Packaging described the company's paper mill operation in Amherst Co. that has been the 2002 winner of the Governor's Environmental Excellence Award. The facility produces corrugated cardboard, recycle liner board, and other paper products. As a byproduct, 70 tons of compost are produced per day. The manufacturing intakes include wood and old corrugated container that are pulped, cleaned, and converted to paper. The paper mill is subject to numerous permitting provisions at the federal, state, and local level. The manufacturing process used by Greif has been environmentally responsible for many years: all fiber used is renewable or recycled; sustainable forestry practices are used; 55 percent of steam is generated from biomass; 65 percent of residuals are converted to compost or used as fuel; and the raw material utilization rate is greater than 97 percent. The company has looked to expand its natural resource recovery even further through the possibilities of installing an anaerobic digester at the wastewater treatment facility, combusting wood waste residuals for fuel, reducing solid waste generated through fiber cleaning technologies, and improving energy efficiency through new technologies.

Tim Davidick, ADMMicro, addressed the need for a more informed approach to energy use. He noted the accelerating gap between energy supply and energy demand due to population and income growth, bigger homes, and the increase in the variety of goods using more electricity in those homes. The growing demand for electricity will be met, in large part, by energy efficiency and conservation. ADMMicro is a company in Roanoke

that manufactures advanced submetering and energy management systems that can dynamically control energy consuming equipment and reduce demand peaks. The meters can measure, control, and monitor energy consuming building systems such as HVAC, lighting, freezers/coolers, humidity, and CO<sub>2</sub>. The advanced submetering and control systems provide data that can be used to monitor and control building systems for optimal performance. The data analysis is the crucial link between energy data and developing solutions for improved system performance and reduced energy cost. ADMMicro develops and manufactures patented Smart Grid technology and provides analytical services that helps its customers gain control over their energy consumption and cost.

**Community Power: Biomass-Powered Distributed Generation** Al Weed with Public Policy Virginia discussed the benefits that can be achieved through biomass-fired distributed generation through a community power initiative using combined heat and power ("CHP"). CHP has the potential to increase fuel consumption and efficiency by capturing the energy from heat and steam losses in electricity production and using it to generate thermal energy. If the generation is fed through locally grown biomass, then the rural economies would benefit from producing the biomass feedstocks. Many of these feedstocks, such as warm season grasses, require minimal water and fertilizer and would provide a natural buffer for the Chesapeake Bay. Mr. Weed endorses the policy of a mandatory renewable portfolio standard.

**In Business and Building Green: LEED-Certified in Floyd County** Jack Wall, owner of Wall Residences, spoke to the subcommittee about the use sustainable building practices in a rural setting. His headquarters office in Floyd County is LEED (Leadership in Energy and Environmental Design) Gold certified by the United States Green Building Council. Green features include a very tight and energy efficient building with fresh air intakes through a heat exchange system to dramatically reduce energy loss, full use of energy efficient lighting (mostly CFL and LED lighting), 82 photovoltaic solar panels to produce most of the energy needs for the building, two solar thermal panels to heat water, day lighting to naturally brighten interior spaces from 24 light tubes, 12 geothermal wells to heat and cool the building, rainwater collection systems for non potable water uses and many uses of recycled and local materials that can be safely recycled back into the environment.

**Biofuels: Opportunities for the Rural Economy** Ken Moss discussed his business, Piedmont Bio Products, with the subcommittee. Piedmont is a clean energy start up located in Gretna and financed with assistance from CIT and the Tobacco Indemnification and Revitalization Commission. The primary product from Piedmont is a bio crude oil, not ethanol, that can be sold in place of diesel and propane through normal distribution channels. Mr. Moss reviewed the strategic advantages of this technology in Virginia, including a geographically desirable location near northeast markets, cellulosic feedstocks that are perennial and free of market manipulation, low energy costs, and a scalable, modular technology. Mr. Moss hopes that the market distribution channels remain open for biofuel producers.

**Other Business** Delegate Charles D. Poindexter thanked the presenters and announced that the subcommittee would be touring the Piedmont Bio Products facility after lunch. Members of the public were welcomed to attend. The subcommittee reviewed several issues forwarded from the full Commission on Energy and Environment. Mr. Hatcher

expressed his concern and hope that there would be no obstacles to installing wind turbines in residential and agricultural areas because of zoning ordinances and regulations. The subcommittee also considered whether to support legislation that would repeal the Solar Photovoltaic Manufacturing Incentive Grant Program and create a program to provide financial incentives to companies that manufacture equipment for non-emitting technologies and create at least 200 full-time jobs. Delegate Poindexter expressed concern about the cost of the program and suggested that the members discuss it again at the meeting of the full Commission.

**Members Present:** Delegate Charles D. Poindexter, Mr. Patrick G. Hatcher, Mr. Arlen K. Bolstad, Mr. Stephen A. Walz, and Ms. Angela L. Jenkins for Mr. David K. Paylor.